



JC01 d PCT/PTO 01 AUG 2005

#3

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No.: UMD-0103  
Inventors: Dooley et al.  
Serial No.: 10/533,355  
Filing Date: Not Yet Assigned  
Examiner: Not Yet Assigned  
Group Art Unit: Not Yet Assigned  
Title: A Method for Increasing Synaptic Growth  
or Plasticity

I, Jane Massey Licata, Registration No. 32,257,  
certify that this correspondence is being deposited  
with the U.S. Postal Service as First Class mail in  
an envelope addressed to the Commissioner for Patents  
P.O. Box 1450, Alexandria, VA 22313-1450

On this date: July 29, 2005

Jane Massey Licata  
Jane Massey Licata, Registration No. 32,257

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 C.F.R. §1.56 and in accordance with 37 C.F.R. §§1.97-1.98, information relating to the above-identified application is hereby disclosed. Inclusion of information in this statement is not to be construed as an admission that this information is material as that term is defined in 37 C.F.R. §1.56(b).

(XX) In accordance with §1.97(b), since this Information Disclosure Statement is being filed either within three months of the filing date of the above-identified application, within three months of the date of entry into

the national stage of the above identified application as set forth in §1.491, or before the mailing date of a first Office Action on the merits of the above-identified application, no additional fee is required.

( ) In accordance with §1.97(c), this Information Disclosure Statement is being filed after the period set forth in §1.97(b) above but before the mailing date of either a Final Action under §1.113 or a Notice of Allowance under §1.311, therefore:

( ) Certification in Accordance with §1.97(e) is attached hereto; or

( ) Authorization to charge Deposit Account No. 50-1619 the fee of \$180.00 as set forth in §1.17(p) is provided.

( ) In accordance with §1.97(d), this Information Disclosure Statement is being filed after the mailing date of either a Final Action under §1.113 or a Notice of Allowance under §1.311 but before the payment of the Issue Fee, therefore included are: Certification in Accordance with §1.97(e); Petition Requesting Consideration of the Information Disclosure Statement; and the fee of \$130.00 as set forth in §1.17(I) (1).

(XX) Copies of each of the references listed on the attached Form PTO-1449 (modified) are enclosed herewith.

( ) In accordance with §1.98(d), copies of some or all of the references listed on the attached Form PTO-1449 (modified) are not enclosed herewith because they were previously submitted to the U.S. Patent and Trademark Office in prior application Serial No. \_\_\_\_\_, filed \_\_\_\_\_, for which a claim for priority under 35 U.S.C. §120 has been made in the instant application.

Please charge any deficiency or credit any overpayment to Deposit Account No. 50-1619. This form is submitted in duplicate.

( ) The relevance of the listed references in a foreign language is as stated in the specification at pages @@.

(XX) All listed references are in the English language.

Respectfully submitted,

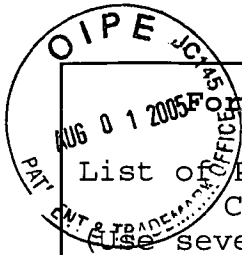
*Jane Massey Licata*

Jane Massey Licata  
Registration No. 32,257

Date: July 29, 2005

Licata & Tyrrell P.C.  
66 E. Main Street  
Marlton, New Jersey 08053

(856) 810-1515



Form PTO-1449 Modified		Docket No. UMD-0103	Serial No. 10/533,355
List of Patents and Publications Cited by Applicant (Use several sheets if necessary)		Applicant Ira B. Black	
		Filing Date 8/1/05 <del>Not Yet Assigned</del>	Group 1649 <del>Not Yet Assigned</del>
U.S. Department of Commerce			

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

/R.H./	AA	Berger et al., "Secreted placental alkaline phosphatase: a powerful new quantitative indicator of gene expression in eukaryotic cells", Gene 1988 66:1-10
	AB	Berninger et al., "Synaptic Reliability Correlates with Reduced Susceptibility to Synaptic Potentiation by Brain-Derived Neurotrophic Factor", Learning and Memory 1999 6:232-242
	AC	Cavallaro et al., "Programs of Gene Expression during the Laying Down of Memory Formation as Revealed by DNA Microarrays", Neurochemical Research 2002 27(10):1201-1207
	AD	Chalfie et al., "Green Fluorescent Protein as a Marker for Gene Expression", Science 1994 263:802-805
	AE	Chao Moses V., "Trophic Factors: An Evolutionary Cul-de-Sac or Door Into Higher Neuronal Function?", Journal of Neuroscience Research 2000 59:353-355
	AF	Cole et al., "Human monoclonal antibodies", Molecular and Cellular Biochemistry 1984 62:109-120
	AG	Cote et al., "Generation of human monoclonal antibodies reactive with cellular antigens", Proc. Natl. Acad. Sci. USA 1983 80:2026-2030
	AH	Cullen et al., "Secreted Placental Alkaline Phosphatase as a Eukaryotic Reporter Gene", Methods in Enzymology 1992 216:362-368
↓	AI	<sup>DE</sup> WET et al., "Firefly Luciferase Gene: Structure and Expression in Mammalian Cells", Molecular and Cellular Biology 1987 7(2):725-737

EXAMINER

/Robert Hayes/

DATE CONSIDERED

09/08/2008

Form PTO-1449 Modified		Docket No. UMD-0103	Serial No. 10/533,355
List of Patents and Publications Cited by Applicant (Use several sheets if necessary)		Applicant Ira B. Black	
		Filing Date Not Yet Assigned	Group Not Yet Assigned
U.S. Department of Commerce Patent and Trademark Office			
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
/R.H./	AJ	Donahue et al., "Transcriptional Profiling Reveals Regulated Genes in the Hippocampus During Memory Formation", Hippocampus 2002 12:821-833	
	AK	Flotte et al., "Stable in vivo expression of the cystic fibrosis transmembrane conductance regulator with an adeno-associated virus vector", Proc. Natl. Acad. Sci. USA 1993 90:10613-10617	
	AL	Francis et al., "Monitoring Bioluminescent <i>Staphylococcus aureus</i> Infections in Living Mice Using a Novel luxABCDE Construct", Infection and Immunity 2000 68(6):3594-3600	
	AM	Gordon et al., "lux genes and the applications of bacterial bioluminescence", Journal of General Microbiology 1992 138:1289-1300	
	AN	Gorman et al., "Recombinant Genomes Which Express Chloramphenicol Acetyltransferase in Mammalian Cells", Molecular and Cellular Biology 1982 2(9):1044-1051	
	AO	Gottschalk et al., "Presynaptic Modulation of Synaptic Transmission and Plasticity by Brain-Derived Neurotrophic Factor in the Developing Hippocampus", The Journal of Neuroscience 1998 18(17):6830-6839	
	AP	Guzowski et al., "Inhibition of Activity-Dependent Arc Protein Expression in the Rat Hippocampus Impairs the Maintenance of Long-Term Potentiation and the Consolidation of Long-Term Memory", The Journal of Neuroscience 2000 20(11):3993-4001	
	AQ	Guzowski et al., "Experience-Dependent Gene Expression in the Rat Hippocampus after Spatial Learning: A Comparison of the Immediate-Early Genes Arc, c-fos, and zif268", The Journal of Neuroscience 2001 21(14):5089-5098	
↓	AR	Heim et al., "Anticipated stimuli across skin", Nature 1995 373:663-664	
EXAMINER		/Robert Hayes/	DATE CONSIDERED 09/08/2008

<b>Form PTO-1449 Modified</b>		Docket No. <b>UMD-0103</b>	Serial No. <b>10/533,355</b>
List of Patents and Publications Cited by Applicant (Use several sheets if necessary)		Applicant <b>Ira B. Black</b>	
		Filing Date <b>Not Yet Assigned</b>	Group <b>Not Yet Assigned</b>
U.S. Department of Commerce			
<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>			
/R.H./	AS	Hevroni et al., "Hippocampal Plasticity Involves Extensive Gene Induction and Multiple Cellular Mechanisms", Journal of Molecular Neuroscience 1998 10:75-98	
	AT	Huh et al., "Functional Requirement for Class I MHC in CNS Development and Plasticity", Science 2000 290:2155-2159	
	AU	Huse et al., "Generation of a Large Combinatorial Library of the Immunoglobulin Repertoire in Phage Lambda", Science 1989 246:1275-1281	
	AV	Kang et al., "Antibody redesign by chain shuffling from random combinatorial immunoglobulin libraries", Proc. Natl. Acad. Sci. USA 1991 88:11120-11123	
	AW	Kaplitt et al., "Long-term gene expression and phenotypic correction using adeno-associated virus vectors in the mammalian brain", Nature Genetics 1994 8:148-153	
	AX	Karp, Matti, "Expression of bacterial luciferase genes from <i>Vibrio harveyi</i> in <i>Bacillus subtilis</i> and in <i>Escherichia coli</i> ", Biochimica et Biophysica Acta 1989 1007:84-90	
	AY	Kohler et al., "Continuous cultures of fused cells secreting antibody of predefined specificity", Nature 1975 256:495-497	
	AZ	Korte et al., "A role for BDNF in the late-phase of hippocampal long-term potentiation", Neuropharmacology 1998 37:553-559	
	BA	Kozbor et al., "Specific Immunoglobulin Production and Enhanced Tumorigenicity Following Ascites Growth of Human Hybridomas", Journal of Immunological Methods 1985 81:31-42	
<b>EXAMINER</b> /Robert Hayes/		<b>DATE CONSIDERED</b> 09/08/2008	

<b>Form PTO-1449 Modified</b>  List of Patents and Publications Cited by Applicant (Use several sheets if necessary)  U.S. Department of Commerce		Docket No. <b>UMD-0103</b>	Serial No. <b>10/533,355</b>
		Applicant <b>Ira B. Black</b>	
		Filing Date <b>Not Yet Assigned</b>	Group <b>Not Yet Assigned</b>
<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>			
/R.H./	BB	LEESMAN et al., "Modulation of Unitary Glutamatergic Synapses by Neurotrophin-4/5 or Brain-Derived Neurotrophic Factor in Hippocampal Microcultures: Presynaptic Enhancement Depends on Pre-Established Paired-Pulse Facilitation", Neuroscience 1998 86(2):399-413	
	BC	Levine et al., "Selective role for trkB neurotrophin receptors in rapid modulation of hippocampal synaptic transmission", Molecular Brain Research 1996 38:300-303	
	BD	Luo et al., "Identification of Maze Learning-Associated Genes in Rat Hippocampus by cDNA Microarray", Journal of Molecular Neuroscience", 2001 17:397-404	
	BE	Merrifield, R.B., "Solid Phase Peptide Synthesis. I. The Synthesis of a Tetrapeptide", J. Am. Chem. Soc. 1963 85:2149-2154	
	BF	Messaoudi et al., "Brain-Derived Neurotrophic Factor Triggers Transcription-Dependent, Late Phase Long-Term Potentiation In Vivo", The Journal of Neuroscience 2002 22(17):7453-7461	
	BG	Minichiello et al., "Mechanism of TrkB-Mediated Hippocampal Long-Term Potentiation", Neuron 2002 36:121-137	
	BH	Mizuno et al., "Phosphatidylinositol 3-kinase: a molecule mediating BDNF-dependent spatial memory formation", Molecular Psychiatry 2003 8:217-224	
	BI	Morrison et al., "Chimeric human antibody molecules: Mouse antigen-binding domains with human constant region domains", Proc. Natl. Acad. Sci. USA 1984 81:6851-6855	
↓	BJ	Neuberger et al., "Recombinant antibodies possessing novel effector functions", Nature 1984 312:604-608	
<b>EXAMINER</b> /Robert Hayes/		<b>DATE CONSIDERED</b> 09/08/2008	

<b>Form PTO-1449 Modified</b>  List of Patents and Publications Cited by Applicant (Use several sheets if necessary)  U.S. Department of Commerce		Docket No. <b>UMD-0103</b>	Serial No. <b>10/533,355</b>
		Applicant <b>Ira B. Black</b>	
		Filing Date <b>Not Yet Assigned</b>	Group <b>Not Yet Assigned</b>
<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>			
/R.H./	BK	Nguyen et al., "Requirement of a Critical Period of Transcription for Induction of a Late Phase of LTP", Science 1994 265:1104-1107	
	BL	Nolan et al., "Fluorescence-activated cell analysis and sorting of viable mammalian cells based on $\beta$ -D-galactosidase activity after transduction of <i>Escherichia coli lacZ</i> ", Proc. Natl. Acad. Sci. USA 1988 85:2603-2607	
	BM	Orlandi et al., "Cloning immunoglobulin variable domains for expression by the polymerase chain reaction", Proc. Natl. Acad. Sci. USA 1989 86:3833-3837	
	BN	Patterson et al., "Some Forms of cAMP-Mediated Long-Lasting Potentiation Are Associated with Release of BDNF and Nuclear Translocation of Phospho-MAP Kinase", Nature 2001 32:123-140	
	BO	Possenti et al., "Expression, Processing, and Secretion of the Neuroendocrine VGF Peptides by INS-1 Cells", Endocrinology 1999 140(8):3727-3735	
	BP	Prost et al., "CAT vectors for analysis of eukaryotic promoters and enhancers", Gene 1986 45:107-111	
	BQ	Rosenfeld et al., "Adenovirus-Mediated Transfer of a Recombinant $\alpha$ 1-Antitrypsin Gene to the Lung Epithelium in Vivo", Science 1991 252:432-434	
	BR	Rosenfeld et al., "In Vivo Transfer of the Human Cystic Fibrosis Transmembrane Conductance Regulator Gene to the airway Epithelium", Cell 1992 68:143-155	
↓	BS	Ruitenbergh et al., "Adeno-associated viral vectors as agents for gene delivery: application in disorders and trauma of the central nervous system", Methods 2002 28:182-194	
<b>EXAMINER</b> /Robert Hayes/		<b>DATE CONSIDERED</b> 09/08/2008	



<b>Form PTO-1449 Modified</b>		Docket No. <b>UMD-0103</b>	Serial No. <b>10/533,355</b>
List of Patents and Publications Cited by Applicant (Use several sheets if necessary)		Applicant <b>Ira B. Black</b>	
		Filing Date <b>Not Yet Assigned</b>	Group <b>Not Yet Assigned</b>
U.S. Department of Commerce			
<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>			
/R.H./	BT	Salton et al., "VGF:A Novel Rose for This Neuronal and Neuroendocrine Polypeptide in the Regulation of Energy Balance", Frontiers in Neuroendocrinology 2000 21:199-219	
	BU	Schinder et al., "Postsynaptic Target Specificity of Neurotrophin-Induced Presynaptic Potentiation", Neuron 2000 25:151-163	
	BV	Shi et al., "Brain-specific expression of an exogenous gene after i.v. administration", Proc. Natl. Acad. Sci. USA 2001 98(22):12754-12759	
	BW	Takeda et al., "Construction of chimaeric processed immunoglobulin genes containing mouse variable and human constant region sequences", Nature 1985 314:452-454	
	BX	Thakker-Varia et al., "Rab3A Is Required for Brain-Derived Neurotrophic Factor-Induced Synaptic Plasticity:Transcriptional Analysis at the Population and Single-Cell Levels", The Journal of Neuroscience 2001 21(17):6782-6790	
	BY	Trani et al., "Tissue-Specific Processing of the Neuroendocrine Protein VGF", Journal of Neurochemistry 1995 65(6):2441-2449	
	BZ	Tyler et al., "From Acquisition to Consolidation:On the Role of Brain-Derived Neurotrophic Factor Signaling in Hippocampal-Dependent Learning", Learning & Memory 2002 9:224-237	
	CA	Winter et al., "Man-made antibodies", Nature 1991 349:293-299	
↓	CB	Wu et al., "Incorporation of Adenovirus into a Ligand-based DNA Carrier System Results in Retention of Original Receptor Specificity and Enhances Targeted Gene Expression", The Journal of Biological Chemistry 1994 269(15):11542-11546	
<b>EXAMINER</b>		<b>DATE CONSIDERED</b>	
/Robert Hayes/		09/08/2008	

<b>Form PTO-1449 Modified</b>  List of Patents and Publications Cited by Applicant (Use several sheets if necessary)  U.S. Department of Commerce		Docket No. <b>UMD-0103</b>	Serial No. <b>10/533,355</b>
		Applicant <b>Ira B. Black</b>	
		Filing Date <b>Not Yet Assigned</b>	Group <b>Not Yet Assigned</b>
<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>			
/R.H./	CC	Xu et al., "Quantitative comparison of expression with adeno-associated virus (AAV-2) brain-specific gene cassettes", Gene Therapy 2001 8:1323-1332	
↓	CD	Yamada et al., "Role for brain-derived neurotrophic factor in learning and memory", Life Sciences 2002 70:735-744	
↓	CE	Ying et al., "Brain-Derived Neurotrophic Factor Induces Long-Term Potentiation in Intact Adult Hippocampus: Requirement for ERK Activation Coupled to CREB and Upregulation of Arc Synthesis", The Journal of Neuroscience 2002 22(5):1532-1540	
<b>EXAMINER</b>		/Robert Hayes/	
		<b>DATE CONSIDERED</b>	09/08/2008